

What we claim is:

1. A method for the prevention or treatment of myelin disorders, comprising modulating a Ulip/CRMP activity.
2. The method of claim 1, wherein said Ulip/CRMP is Ulip6/CRMP5.
3. The method of claim 1, wherein said Ulip/CRMP is the Ulip2/CRMP2.
4. The method of claim 1, wherein the myelin disorder is multiple sclerosis.
5. The method of claim 1, wherein the myelin disorder is HTLV-1 associated myelopathy.
6. A method for the prevention or treatment of myelin disorders, comprising administering to a patient in need of such treatment a therapeutically effective amount of an agent selected from the group consisting of a Ulip/CRMP protein, a nucleic acid coding for a Ulip/CRMP protein, an anti-sense sequence capable of specifically hybridizing with said nucleic acid, an antibody directed against the Ulip/CRMP protein, and an aptamer capable of binding said protein, and a pharmacologically acceptable carrier.
7. The method of claim 6, wherein said Ulip/CRMP is Ulip6/CRMP5.
8. The method of claim 6, wherein said Ulip/CRMP is the Ulip2/CRMP2.

9. The method of claim 6, wherein the myelin disorder is multiple sclerosis.

10. The method of claim 6, wherein the myelin disorder is HTLV-1 associated myelopathy.

11. The method of claim 6, wherein said Ulip/CRMP is the Ulip6/CRMP5 protein which comprises the amino acid sequence SEQ ID n° 2.

12. The method of claim 6, wherein said Ulip/CRMP is the Ulip2/CRMP2 protein which comprises the amino acid sequence SEQ ID n° 4.

13. The method of claim 6, wherein said nucleic acid is the nucleic acid coding for the Ulip6/CRMP5 protein which comprises the nucleic acid sequence from nucleotides 163 to 1854 in SEQ ID n° 1.

14. The method of claim 6, wherein said nucleic acid is the nucleic acid coding for the Ulip2/CRMP2 protein which comprises the nucleic acid sequence from nucleotides 72 to 1790 in SEQ ID n° 3.

15. The method of claim 6 wherein said Ulip/CRMP protein is a purified Ulip6/CRMP5.

16. The method of claim 6 wherein said Ulip/CRMP protein is a purified Ulip2/CRMP2.

17. A method of diagnosing a myelin disorder in a subject, comprising :

- evaluating the level of expression of at least one agent selected from the group consisting of a Ulip/CRMP protein and antibodies to a Ulip/CRMP protein present in the sample in a biological sample from said subject ;

- comparing the level of expression of said agent in the biological sample with expression levels of said agent in control subjects.

5 18. The method of claim 17, wherein the Ulip/CRMP protein is Ulip2/CRMP2 and/or Ulip6/CRMP5.

19. The method of claim 17, wherein the antibodies are antibodies to a Ulip2/CRMP2 protein and/or to a Ulip6/CRMP5 protein.

10 20. The method of claim 17, wherein the myelin disorder is multiple sclerosis.

15 21. The method of claim 17, wherein the myelin disorder is HTLV1-associated myelopathy.

22. A method for identifying agents useful for the prevention or treatment of myelin disorders, comprising :

- contacting a Ulip/CRMP protein or a Ulip/CRMP expressing cell with a test compound ;

20 - determining if the test compound has a modulatory effect on the Ulip/CRMP activity ; and

- identifying those test compounds having a stimulatory or inhibitory effect on the Ulip/CRMP protein, as useful for the prevention or treatment of myelin disorders.

25 23. The method of claim 22 wherein said modulatory effect of the test compound is assessed by evaluating the level of expression of the Ulip/CRMP protein.

30 24. The method of claim 22 wherein said Ulip/CRMP expressing cell is an oligodendrocyte.

25. The method of claim 24 wherein said modulatory effect of the test compound is assessed by an oligodendrocyte process extension assay

5 26. The method of claim 22 wherein said Ulip/CRMP protein is a Ulip2/CRMP2 and/or a Ulip6/CRMP5 protein.

27. A Ulip/CRMP activity modulatory agent identified by the method of claim 22.

10 28. A composition for treating or preventing a myelin disorder comprising an agent according to claim 27 and a pharmaceutically acceptable carrier.

15 29. A method of treating or preventing a myelin disorder comprising administering to a patient in need of such treatment a therapeutically effective amount of the composition of claim 28.

30. A method for identifying agents useful for the prevention or treatment of myelin disorders, comprising :

20 - contacting a Ulip/CRMP protein an inducer or effector of said protein with a test compound in a suitable medium allowing the interaction between the Ulip/CRMP protein and its inducer or effector protein;

25 - determining if the test compound has a stimulatory or inhibitory effect on the interaction between the Ulip/CRMP protein and its inducer or effector protein; and

- identifying those test compounds having a stimulatory or inhibitory effect on the interaction between the Ulip/CRMP protein and its inducer or effector protein, as useful for the prevention or treatment of myelin disorders.

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31. The method of claim 30, wherein the Ulip/CRMP protein is a Ulip2/CRMP2 protein or a Ulip6/CRMP5 protein.

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32. An agent capable of stimulating or inhibiting the interaction between a Ulip/CRMP protein and its inducer or effector protein identified by the method of claim 30.

5 33. An agent capable of stimulating or inhibiting the interaction between a Ulip6/CRMP5 protein and a Ulip2/CRMP2 protein identified by the method of claim 30

10 34. A composition for treating or preventing a myelin disorder comprising an agent according to claim 32 and a pharmaceutically acceptable carrier.

15 35. A composition for treating or preventing a myelin disorder comprising an agent according to claim 33 and a pharmaceutically acceptable carrier.

20 36. A method of treating or preventing a myelin disorder comprising administering to a patient in need of such treatment a therapeutically effective amount of the composition of claim 34.

25 37. A system for determining which compounds may be useful for treating or preventing a myelin disorder comprising :

- a testing means which allows one to contact a test compound ;
and

30 - a determining means to determine if the test compound has a stimulatory or inhibitory activity on the Ulip/CRMP protein, said activity being indicative of a compound potentially useful for treating or preventing a myelin disorder.

38. The system according to claim 37, wherein the Ulip/CRMP protein is a Ulip2/CRMP2 protein and/or a Ulip6/CRMP5 protein.

39. A method for identifying an endogenous agent as a therapeutic target for the prevention or the treatment of myelin disorders comprising :

- contacting a cell, a tissue sample, a biological liquid sample, or an extract thereof, from a patient affected with a myelin disorder, with a Ulip/CRMP protein in a suitable medium allowing the Ulip/CRMP protein to interact with an endogenous agent ;

- determining if the Ulip/CRMP protein interacts with an endogenous agent ;

- identifying those endogenous agents interacting with the Ulip/CRMP protein as therapeutic targets for the prevention or the treatment of myelin disorders.

40. The method of claim 39 wherein the Ulip/CRMP protein is Ulip2/CRMP2 and/or Ulip/CRMP5.

41. The method of claim 39 wherein said cell is an oligodendrocyte.

42. The method of claim 39 wherein tissue sample is a brain tissue sample.

43. The method of claim 39 wherein biological liquid is blood or spinal fluid.